


FORM PTO-1390 (REV 10-94)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		DOCKET #: 3245-628PCT	
TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371					
INTERNATIONAL APPLICATION NO PCT/DE97/00787		INTERNATIONAL FILING DATE 15 Apr, 1997		U.S. APPLICATION NO. (If known, see 37 CFR 1.5) 09/171735	
TITLE OF INVENTION Process for Manufacturing Hot Rolled Steel Strips					
APPLICANT(S) FOR DO/EO/US Joachim SCHÖNBECK; Herbert QUAMBUSCH; Hans HOPPMANN					
<p>Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:</p> <ol style="list-style-type: none"> 1. <input checked="" type="checkbox"/> This is a FIRST submission of items concerning a filing under 35 U.S.C. 371. 2. <input type="checkbox"/> This is a SECOND or SUBSEQUENT submission of items concerning a filing under 35 U.S.C. 371 3. <input checked="" type="checkbox"/> This express request to begin national examination procedures (35 U.S.C. 371(f)) at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371(b) and PCT Articles 22 and 39(1). 4. <input checked="" type="checkbox"/> A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed priority date. 5. <input checked="" type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371(c)(2)) <ol style="list-style-type: none"> a. <input checked="" type="checkbox"/> is transmitted herewith (required only if not transmitted by the International Bureau). b. <input type="checkbox"/> has been transmitted by the International Bureau. c. <input type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US) 6. <input checked="" type="checkbox"/> A translation of the International Application into English (35 U.S.C. 371(c)(2)). 7. <input checked="" type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3)) <ol style="list-style-type: none"> a. <input checked="" type="checkbox"/> are transmitted herewith (required only if not transmitted by the International Bureau). b. <input type="checkbox"/> have been transmitted by the International Bureau. c. <input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired. d. <input type="checkbox"/> have not been made and will not be made. 8. <input checked="" type="checkbox"/> A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)). 9. <input type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)). 10. <input checked="" type="checkbox"/> A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)). <p>Items 11. to 16. below concern other document(s) or information included:</p> <ol style="list-style-type: none"> 11. <input type="checkbox"/> An Information Disclosure Statement under 37 CFR 1.97 and 1.98. 12. <input type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included. 13. <input checked="" type="checkbox"/> A FIRST preliminary amendment. <input type="checkbox"/> A SECOND or SUBSEQUENT preliminary amendment. 14. <input type="checkbox"/> A substitute specification. 15. <input type="checkbox"/> A change of power of attorney and/or address letter. 16. <input checked="" type="checkbox"/> Other items or information (<i>specify</i>): <u>PCT Publication Sheet, Int'l Preliminary Examination Report, Int'l Search Report, PCT Request</u> 					

U S APPLICATION NO (If known see 37 C F R 1.5)		INTERNATIONAL APPLICATION NO PCT/DE97/00787		ATTORNEY'S DOCKET NUMBER 3245-628PCT	
17.[x]The following fees are submitted:					
Basic National Fee (37 CFR 1.492(a)(1)-(5)): Search Report has been prepared by the EPO or JPO \$930.00 International preliminary examination fee paid to USPTO (37 CFR 1.482).. \$720.00 No international preliminary examination fee paid to USPTO (37 CFR 1.482) but international search fee paid to USPTO (37 CFR 1.445(a)(2)) \$790.00 Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO \$1,070.00 International preliminary examination fee paid to USPTO (37 CFR 1.482) and all claims satisfied provisions of PCT Article 33(2)-(4)..... \$98.00 <div style="text-align: right;">ENTER APPROPRIATE BASIC FEE AMOUNT =</div>				\$ 930.00	
Surcharge of \$130.00 for furnishing the oath or declaration later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492(e)).				\$	
Claims	Number Filed	Number Extra	Rate		
Total Claims	8 - 20 =	0	x \$22.00	\$	
Independent Claims	1 - 3 =	0	x \$82.00	\$	
Multiple dependent claim(s) (if applicable)			+ \$270.00	\$	
TOTAL OF ABOVE CALCULATIONS =				\$	930.00
Reduction of ½ for filing by small entity, if applicable. Verified Small Entity statement must also be filed. (Note 37 CFR 1.9, 1.27, 1.28).				\$	
SUBTOTAL =				\$	930.00
Processing fee of \$130.00 for furnishing the English translation later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492(f)).				\$	
TOTAL NATIONAL FEE =				\$	930.00
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by the appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property				\$	
TOTAL FEES ENCLOSED =				\$	930.00
				Amount to be refunded:	\$
				charged:	\$
a. [x] One check(s) in the amount(s) of \$ <u>930.00</u> and to cover the above fees is/are enclosed. b. <input type="checkbox"/> Please charge my Deposit Account No. <u>03-2412</u> in the amount of \$ _____ to cover the above fees. A duplicate copy of this sheet is enclosed. c. [x] The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. <u>03-2412</u> . A duplicate copy of this sheet is enclosed. NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status. SEND ALL CORRESPONDENCE TO: <div style="display: flex; justify-content: space-between;"> <div> Cohen, Pontani, Lieberman & Pavane 551 Fifth Avenue, Suite 1210 New York, New York 10176 </div> <div style="text-align: right;">  Thomas C. Pontani Registration Number: 29,763 Tel: (212) 687-2770 </div> </div>					

09/171735

By express mail no. EL196743699US October 23, 1998

Attorney Docket # 3245-628PCT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re National Phase PCT Application of

Joachim SCHÖNBECK et al.

International Appln. No.: PCT/DE97/00787

International Filing Date: 15 Apr, 1997

For: Process for Manufacturing Hot Rolled Steel
Strips

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents

Washington, D.C. 20231

BOX PCT

S I R:

Prior to examination of the above-identified application please amend the application as follows:

In the Specification:

On page 1, line 1, delete the line in its entirety;

Line 3, replace "Description" with the following heading,

--

Background of the Invention

1. Field of the Invention--;

Line 4, replace "the production of " to --producing--;

Line 6, replace “, wherein initial rolling is carried out” to --. Initial

rolling is performed--;

Line 10, delete the line in its entirety and replace with --first deformation stage. The coil of the intermediate strip is uncoiled after reaching an intermediate coil weight and--;

Line 12, after the end of the line, starting its own line, add the heading,
--2. Description of the Prior Art--;

Line 13, delete the line in its entirety and replace with --A prior art process for producing hot-rolled steel is described in--;

Line 16, change “carried out” to --performed--;

Line 17, change “carried out” to --performed--;

Line 19, change “in the form of” to --including--;

Line 20, change “being rolled down, wherein the weight of the” to --the initial rolling stage until the coil reaches a predetermined weight which--;

Line 21, delete the first occurrence of “coil”;

Line 23, delete “weight of”;

Line 24, change “the finished coil” to --desired finished coil weight--;

Line 27, change “When” to --Once--;

Line 28, change “as much as desired” to --up to--;

Line 29, delete the line and replace with --the plant capacity and technical--;

On page 2, line 2, change "In order to" to --To-- and insert --prior art-- before

"methods";

Line 7, after "requires" insert --the use of--;

Line 9, delete "as was already mentioned,"

Line 12, before "coil weight" insert --finished--;

Line 15, change "when" to --associated with--;

Line 16, change "so that" to --which causes-- and delete "occur specifically";

Line 18, after the end of the line, starting on its own line, add the heading,

--SUMMARY OF THE INVENTION--;

Line 23, insert --present-- before "invention" and delete "in the first deformation;

Line 24, delete "stage" and change "of the " to --from a--;

Line 25, change "out in endless manner to form" to --in a continuous manner through a first deformation stage to form an--;

Line 26, change ", and in that after more or less endless" to --. After continuous--;

Line 27, change "the intermediate strip of this intermediate coil" to --the entire intermediate coil through a second deformation stage, the intermediate strip-- and change "desired coil" to --desired finished coil--;

Line 28, delete "only following the second deformation stage" and after the end of the line, add the following heading,

--DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS--

Line 29, delete the line in its entirety and replace with --In a continuous casting plant followed by an initial or first deformation stage--;

Line 30, delete "group" and change "is produced by an endless rolling process for finishing" to --outputted from the continuous casting plant is reduced by a continuous rolling process in the initial deformation stage for further processing--;

Line 31, change "the finishing" to --a finishing--;

On page 3, line 1, change "endless" to --continuous--, change "cut" to --severed--, and change "deformation" to --first deformation stage--;

Line 2, delete "group", change "cutting" to --severing--, and change "comprising a" to --having a length which includes a--;

Line 4, change "train" to --or second deformation stage--;

Line 6, change "can be operated" to --is operable--;

Line 7, change "carry out endless" to --perform continuous--;

Line 12, after "capacity" insert --or collection capacity--;

Line 14, change "which are made possible by" to --possible--;

Line 15, change "a procedure of the type mentioned above," to -- using the inventive procedure, finished--;

Line 16, change "an endless" to --a continuous--;

Line 17, after "tongue" insert --,--;

Line 18, change "develops" to --, occurs-- and change "first coil" to --
first finished coil--;

Line 19, change "last coil" to --last finished coil--;

Line 21, change "first coil" to --first finished coil--;

Line 23, change "carried out" to --performed-- and change "mandrel" to
--a mandrel--;

Line 32, change "precursor" to --intermediate--; and

On page 4, line 2, change "consist in the possibility of" to --include--.

In the Abstract

On line 1 of the abstract, change "the production of" to --producing--;

Line 3, change ", wherein initial rolling is carried out" to --. Initial
rolling is performed--;

Line 7, change ", wherein the" to --. The-- and change "the coil weight"
to --an intermediate coil weight--;

Line 11, change "endless manner to form" to --continuous manner to
form the--;

Line 12, change ", and after more or less endless" to --. After--;

Line 13, after "intermediate coil" insert --in the second deformation
stage, the coil-- and change "desired coil" to --desired finished coil--.

In the Claims:

Please delete claims 1-5 and add claims 6-13 as follows:

6. (New) A process for producing hot-rolled steel strip from a continuously cast precursor strip, comprising the steps of:

receiving, at a first deformation stage having at least one roll stand, the continuous precursor strip directly from a continuous casting plant in which the continuous precursor strip is produced ;

rolling the precursor material through the first deformation stage to form a continuous intermediate strip;

coiling the continuous intermediate strip to form an intermediate coil having an intermediate coil weight comprising at least 40 tons;

uncoiling the coiled intermediate strip to supply a second deformation stage having at least one roll stand;

rolling the continuous intermediate strip through the second deformation stage to form a finished strip; and

producing a plurality of finished coils from the finished strip by coiling the finished strip and severing the finished strip into sections having a desired finished coil weight after said step of rolling the continuous intermediate strip through the second deformation stage.

7. (New) The process of claim 6, wherein said step of coiling the continuous intermediate strip comprises coiling the continuous intermediate strip using a mandrel.

8. (New) The process of claim 6, wherein said step of coiling the continuous intermediate strip comprises coiling the continuous intermediate strip without using a mandrel.

9. (New) The process of claim 6, further comprising the step of changing the metallurgical characteristics of the intermediate strip by changing a temperature control prior to one of said step of coiling the intermediate strip and said step of rolling the intermediate strip.

10. (New) The process of claim 9, wherein said step of changing the metallurgical characteristics comprises using a flexible speed control.

11. (New) The process of claim 6, further comprising the step of changing the metallurgical characteristics of the intermediate strip by using a flexible speed control.

12. (New) The process of claim 6, further comprising the step of changing the geometrical characteristics of the finished strip by adjusting rolling parameters during said step of rolling the intermediate strip through the second deformation stage.

13. (New) The process of claim 6, further comprising the step of protecting the edges of the intermediate strip from cooling during said step of coiling the intermediate strip


REMARKS

This preliminary amendment is presented to place the application in proper form for examination. No new matter has been added. Early examination and favorable consideration of the above-identified application is earnestly solicited.

Any additional fees or charges required at this time in connection with the application may be charged to our Patent and Trademark Office Deposit Account No. 03-2412.

Respectfully submitted,
COHEN, PONTANI, LIEBERMAN & PAVANE

By: _____


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23 October 1998

3245-628

PROCESS FOR MANUFACTURING HOT ROLLED STEEL STRIPS

Description

The invention is directed to a process for the production of hot-rolled steel strip from continuously cast precursor strip in at least two deformation stages, each deformation stage having one or more roll stands, wherein initial rolling is carried out in the first deformation stage at the output speed at which the precursor strip exits from the continuous casting plant and the intermediate strip thus produced is coiled prior to the second deformation stage at the output speed at which it exits from the first deformation stage, wherein the coil is uncoiled after reaching the coil weight and is supplied to the second deformation stage for finish rolling at the initial roll pass speed and is then coiled in the desired finished coil sizes.

A process of the type mentioned above is described, for example, in the German Patent 38 40 812 C2 and has become known in technical literature as the ISP process. An essential characteristic of this process is the two-stage rolling process in which the first deformation stage is carried out directly following the casting machine at casting speed and the second deformation stage is carried out at an appreciably higher rolling speed. These two rolling process stages are linked by an intermediate coiling system in the form of a coiling furnace in which the continuously cast slab is coiled after being rolled down, wherein the weight of the coil corresponds to the desired finished coil weight. The strand which is initially generated in an endless manner is therefore divided following the first deformation stage when the coil weight reached in the coiling furnace is equal to the weight of the finished coil after rolling down in the second deformation stage.

When rolling hot strip according to this process, the threading of the strip head into the coiler imposes a limit on the rolling speed because there is a risk at very high speeds that the strip head will run up on the run-out table. When the strip head is caught in the coiler, the rolling speed could be increased as much as desired in practice within the framework of possibilities of the plant and technical

requirements.

In order to overcome the above-described limitation of rolling speed, methods have been developed for endless rolling which rely on the principle of joining the precursor strips before entering the finishing train. For example, it is proposed that a plurality of precursor strips are welded together end to end in order to be able to reduce the threading-in processes and enable more or less endless rolling. However, welding the precursor strips together requires complex installations and likewise limits the possible rolling speed.

In the process on which the invention is based, as was already mentioned, precursor strips are produced by the continuous casting process and wound into coils whose weight corresponds to the weight of the finished strip coil. For this purpose, the precursor strip is severed after reaching the coil weight in the intermediate coiling station and is accordingly disconnected from the casting plant so that the strip can be uncoiled in the finishing train at high speed. However, because of the above-described risk when threading the strip head into the coiler, rolling speeds are limited so that considerable problems occur specifically when rolling thin hot strip in the order of magnitude of less than 1.5 mm. Conventional plants are therefore incapable of producing thin hot strip in large quantities.

Proceeding from the aforementioned problems and disadvantages of the prior art, it is the object of the present invention to propose a process for producing hot-rolled steel strip in which very thin strip can also be rolled in a reliable manner at high final rolling speeds.

According to the invention, this object is met in that in the first deformation stage at least 40 tons of a casting sequence of the continuous casting plant is rolled out in endless manner to form intermediate strip and is coiled to form an intermediate coil without severing, and in that after more or less endless finish rolling the intermediate strip of this intermediate coil is severed according to the desired coil weights and coiled as finished strip only following the second deformation stage.

In a casting plant of the type mentioned above followed by a pre-deformation group, precursor material is produced by an endless rolling process for finishing in the finishing train. Contrary to the usual mode of operation in which this precursor material is cut into parts corresponding to the subsequent coil weights, the precursor

material with the intended object of endless rolling is not cut behind the deformation group, but rather is wound, without cutting, into an intermediate coil comprising a plurality of finished coils. Out of this intermediate coil, a plurality of coil lengths are then finished in an endless rolling process in the finishing train. The size of the intermediate coil is limited only by the mechanical configuration of the coiling unit and the rolling time in which the finishing train can be operated without changing rolls. With suitable coiling devices, it is entirely possible to carry out endless rolling of whole casting sequences of a continuous casting plant, but at least substantially greater tonnages can be rolled out than would be possible in plants according to the prior art.

The process steps according to the invention appreciably increase the buffer capacity of the intermediate coiling system. With a coiling capacity of approximately 100 tons, for example, the buffer capacity would increase to 60 minutes per intermediate coil. Due to the higher final rolling speeds which are made possible by a procedure of the type mentioned above, hot strip with thicknesses of less than 1.2 mm can easily be produced in an endless manner. The yield of the plant is improved because the typical rough-rolled end or rolling tongue which must be removed before further processing develops only for the start of the first coil and the end of the last coil behind the finishing train. Moreover, the quality of the rolling stock can be improved because the non-steady state of the initial pass impact or shock takes place only once in the first coil.

The winding of the intermediate strip to form an intermediate coil can be carried out with or without mandrel. Further, according to another feature of the invention, the metallurgical characteristics within an intermediate coil length can be changed by changing the temperature control prior to winding the intermediate coil and/or prior to the second deformation stage and by flexible speed control.

In a further development of the invention, the geometrical characteristics of the finished coil produced from an intermediate coil are changed by suitable adjustment of the rolling parameters during the deformation of the intermediate strip within the second deformation stage.

It is advantageous when at least the edges of the intermediate strip are protected from cooling during the coiling of the precursor strip to form the

intermediate coil.

In sum, the advantages of the present process consist in the possibility of endless rolling without welding of precursor strip, endless rolling with homogeneous precursor strip characteristics with respect to temperature and geometry, increased production in the plant through higher possible rolling speeds which are no longer limited by the threading-in processes in the coiler, and in the creation of greater buffer capacity between the casting strand and the finishing train.

The process can be applied in single-strand or two-strand plants, wherein the coiling principle for the precursor strip can be carried out with a mandrel in coiling furnaces or without a mandrel in coil boxes, as they are called.

1. Process for the production of hot-rolled steel strip from continuously cast precursor material in at least two deformation stages, each deformation stage having one or more roll stands, wherein the precursor material is rolled out in endless manner to form an intermediate strip in the first deformation stage at the output speed at which the precursor material exits from the continuous casting plant, and prior to the second deformation stage at the output speed at which it exits from the first deformation stage the intermediate strip is coiled without severing to form an intermediate coil and is subsequently uncoiled in order to supply the intermediate strip to more or less endless finish rolling, after which this intermediate strip is severed in accordance with the desired coil weights and is coiled as finished strip, characterized in that at least 40 tons of a casting sequence of the continuous casting plant is cast to form precursor strip and is rolled out in the first deformation stage to form intermediate strip whose metallurgical characteristics are changed by changing the temperature control prior to coiling the intermediate coil and/or prior to the second deformation stage and by flexible speed control within an intermediate coil length.
2. Process for the production of hot-rolled steel strip from continuously cast precursor strip according to claim 1, characterized in that the geometrical characteristics of the finished coils produced from an intermediate coil are changed by suitable adjustment of the rolling parameters during the deformation of the intermediate strip within the second deformation stage.
3. Process for the production of hot-rolled steel strip from continuously cast precursor strip according to claims 1 and 2, characterized in that the coiling of the intermediate strip to form an intermediate coil is carried out on a mandrel.
4. Process for the production of hot-rolled steel strip from continuously cast precursor strip according to claims 1 and 2, characterized in that the coiling of the intermediate strip to form an intermediate coil is carried out without a mandrel.

5. Process for the production of hot-rolled steel strip from continuously cast precursor strip according to claims 1 to 4, characterized in that at least the edges of the intermediate strip are protected from cooling during the coiling of the precursor strip to form the intermediate coil.

Abstract

The invention is directed to a process for the production of hot-rolled steel strip from continuously cast precursor strip in at least two deformation stages, each deformation stage having one or more roll stands, wherein initial rolling is carried out in the first deformation stage at the output speed at which the precursor strip exits from the continuous casting plant and the intermediate strip thus produced is coiled prior to the second deformation stage at the output speed at which it exits from the first deformation stage, wherein the coil is uncoiled after reaching the coil weight and is supplied to the second deformation stage for finish rolling at the initial roll pass speed and is then coiled in the desired finished coil sizes. In the first deformation stage, at least 40 tons of a casting sequence of the continuous casting plant is rolled out in endless manner to form intermediate strip and is coiled to form an intermediate coil without severing, and after more or less endless finish rolling the intermediate strip of this intermediate coil is severed according to the desired coil weights and coiled as finished strip only following the second deformation stage.

Combined Declaration for Patent Application and Power of Attorney (Continued)
(Includes Reference to PCT International Applications)Attorney's Docket No.
3245-628PCT

I hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s) or PCT international application(s) designating the United States of America that is/are listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in that/those prior application(s) in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, §1.56(a) which occurred between the filing date of the prior application(s) and the national or PCT international filing date of this application:

PRIOR U.S. APPLICATIONS OR PCT INTERNATIONAL APPLICATIONS DESIGNATING THE U.S. FOR BENEFIT UNDER 35 U.S.C. 120:

U.S. APPLICATIONS		STATUS (check one)		
U.S. APPLICATION NUMBER	U.S. FILING DATE	PATENTED	PENDING	ABANDONED
PCT APPLICATIONS DESIGNATING THE U.S.				
PCT APPLICATION NO.	PCT FILING DATE	U.S. SERIAL NUMBERS ASSIGNED (if any)		
	15 Apr, 1997			

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith (*List name and registration number*)

MYRON COHEN, Reg. No. 17,358; THOMAS C. PONTANI, Reg. No. 29,763; LANCE J. LIEBERMAN, Reg. No. 28,437; MARTIN B. PAVANE, Reg. No. 28,337; MICHAEL C. STUART, Reg. No. 35,698; EDWARD M. WEISZ, Reg. No. 37,257; KLAUS P. STOFFEL, Reg. No. 31,668; CHI K. ENG, Reg. No. 38,870; JULIA S. KIM, Reg. No. 36,567; VINCENT M. FAZZARI, Reg. No. 26,879; ALFRED W. FROEBRICH, Reg. No. 38,887; ANDRES N. MADRID, Reg. No. 40,710

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201	FULL NAME OF INVENTOR	FAMILY NAME <u>SCHÖNBECK</u>	FIRST GIVEN NAME <u>Joachim</u>	SECOND GIVEN NAME
	RESIDENCE, CITIZENSHIP	CITY <u>Düsseldorf</u> <i>DEX</i>	STATE OR FOREIGN COUNTRY <u>Germany</u>	COUNTRY OR CITIZENSHIP <u>Germany</u>
	POST OFFICE ADDRESS	POST OFFICE ADDRESS <u>Salierstrasse 22</u>	CITY <u>Düsseldorf</u>	STATE & ZIP CODE/COUNTRY <u>Germany 40545</u>
202	FULL NAME OF INVENTOR	FAMILY NAME <u>QAMBUSCH</u>	FIRST GIVEN NAME <u>Herbert</u>	SECOND GIVEN NAME
	RESIDENCE, CITIZENSHIP	CITY <u>Ratingen</u> <i>DEX</i>	STATE OR FOREIGN COUNTRY <u>Germany</u>	COUNTRY OR CITIZENSHIP <u>Germany</u>
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Combined Declaration for Patent Application and Power of Attorney (Continued)
(Includes Reference to PCT International Applications)

Attorney's Docket No.
3245-628PCT

2 0 3	FULL NAME OF INVENTOR	FAMILY NAME HOPPMANN	FIRST GIVEN NAME Hans	SECOND GIVEN NAME
	RESIDENCE, CITIZENSHIP	CITY Düsseldorf <i>DE</i>	STATE OR FOREIGN COUNTRY Germany	COUNTRY OF CITIZENSHIP Germany
	POST OFFICE ADDRESS	POST OFFICE ADDRESS Nosenberger Str. 86	CITY Düsseldorf	STATE & ZIP CODE/COUNTRY Germany 40472

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under §1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

SIGNATURE OF INVENTOR 201 <i>Hans-D. Hoppmann</i>	SIGNATURE OF INVENTOR 202 <i>Herbert Hoppmann</i>	SIGNATURE OF INVENTOR 203 <i>Hans-D. Hoppmann</i>
DATE <i>September 21 / 1998</i>	DATE <i>September 24 / 98</i>	DATE <i>Spt. 25 / 98</i>

860027-527260

COMBINED DECLARATION FOR PATENT APPLICATION AND POWER OF ATTORNEY
Includes Reference to PCT International Applications

Attorney's Docket No.
3245-628PCT

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

PROCESS FOR MANUFACTURING HOT ROLLED STEEL STRIPS

the specification of which (check only one item below)

☐ is attached hereto

☐ was filed as United States application

Serial No. _

on _

and was amended

on _ (if applicable).

☒ was filed as PCT international application

Number PCT/DE97/00787

on 15 Apr. 1997

and was amended under PCT Article 19

on _ (if applicable).

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the patentability of the application in accordance with Title 37, Code of Federal Regulations, §1.56(a).

I hereby claim foreign priority benefits under Title 35, United States Code, §119 of any foreign application(s) for patent or inventor's certificate or of any PCT international application(s) designating at least one country other than the United States of America listed below and have also identified below any foreign application(s) for patent or inventor's certificate or any PCT international application(s) designating at least one country other than the United States of America filed by me on the same subject matter having a filing date before that of the application(s) of which priority is claimed.

PRIOR FOREIGN/PCT APPLICATIONS AND ANY PRIORITY CLAIMS UNDER 35 U.S.C. 119:

Country (if PCT, indicate "PCT")	Application Number	Date of Filing (day, month, year)	Priority Claimed Under 35 U.S.C. 119	
Germany	196 17 856.8	23 Apr, 1996	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO
PCT	PCT/DE97/00787	15 Apr, 1997	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO
			<input type="checkbox"/> YES	<input type="checkbox"/> NO
			<input type="checkbox"/> YES	<input type="checkbox"/> NO
			<input type="checkbox"/> YES	<input type="checkbox"/> NO
			<input type="checkbox"/> YES	<input type="checkbox"/> NO
			<input type="checkbox"/> YES	<input type="checkbox"/> NO

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